

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Luke Enriquez <ecsclfe@lux.latrobe.edu.au>  
Subject: [209] 1st QRP Rig to buy : Norcal 40a or Sierra.  
Message-ID: <9609200437.AA09955@lux.latrobe.edu.au>

>  
> Howdy,  
>  
> Firstly I would like to thank all those who responded to my  
> message on buying the Norcal 40a. It came to my attention that the  
> Sierra was also quite a good rig, and its multi band options make  
> it quite attractive. However, the Sierra with 3 Band Modules would  
> set me back \$400 Australian Dollars, whilst the Norcal 40a would  
> set me back \$190 Australian.  
> I suppose its a toss up between being stuck with 40m, which  
> if you consider that your walking during the day (or driving) and  
> usually night has fallen before you have time to set the radio up,  
> 40m might not be the best option (Although I presume 40m is pretty  
> good for a few hours after sunset).  
> 40m also has the disadvantage of a rather large antenna.  
> Considering that I would be using a dipole, usually inverted V,  
> fed with some extra light coax, the 20m, 15m, and 10m bands look  
> more inviting. I'm not a fitness freak, so I need to make things lite  
> (or I just konk out).  
> I have been told that both the Norcal and Sierra have similar  
> performance recievers (which are apprantly excellent). I was rag-chewing  
> with a qrp friend on 80m who lived in the mountains (VK3VKW @ 10w)  
> when I mentioned the Norcal in conversation. After the QSO finished,  
> VK3KMU, a norcal member and owner of the 1st Sierra in Australia.  
> We switched to SSB and spoke about the various QRP kits he  
> had built and constructed. A fantastic bloke, and he offered to show  
> me the Sierra and some other QRP rigs before I bought them.  
> Hopefully exams will be over in 2 months and I can get back to  
> kit building. I dont think I will know where I am when I use one of these  
> QRP rigs. My beast consumes 7 Amps DC on recieve! But hey, it only cost  
> me a fraction of other rigs.  
>  
>  
> Regards,  
> Luke  
>  
> --  
> Luke Enriquez VK3DLE "I only cook with Non-violent  
> 3rd Year Electronic Engineering fruit that pulps itself."  
> Latrobe University, Victoria, Australia.  
> ecsclfe@lux.latrobe.edu.au  
> --  
>

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Stan Goldstein <stan@cruzio.com>  
Subject: [241] 2sc799 info needed  
Message-ID: <32432449.26DB@cruzio.com>

Hi Guys,

Is this an npn ? and is the collector tied to the case ?

Would this make a good substitute for a 2n3553 in the Sierra ?

Thanks,  
Stan N6ULU, now with a kc-2 AND an XIT mod !  
More power on the way.. look out 5 watts..

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: "Thomas J. Whalen" <whalen@swcp.com>  
Subject: [247] 30m 4\$ vertical?????!  
Message-ID: <Pine.SUN.3.91.960920204709.8613D-1000000@kitsune.swcp.com>

I have a neat idea on a cheap short vertical for 30 m if anyone is  
interested.Uses copper tubing and # 14 house wire.....CHEAP CHEAP!!! Tom  
WB5QYT 72 and 73

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Dale LeDoux <dledoux@laci.net>  
Subject: [250] 30m 4\$ vertical?????!  
Message-ID: <1.5.4.16.19960920212955.2a57a166@laci.net>

>From: "Thomas J. Whalen" <whalen@swcp.com>  
>Subject: 30m 4\$ vertical?????!  
>

>I have a neat idea on a cheap short vertical for 30 m if anyone is  
>interested.Uses copper tubing and # 14 house wire.....CHEAP CHEAP!!! Tom  
>WB5QYT 72 and 73  
>

Of course we're interested!! It's a real qrp/radio  
building/operating/getting out there and doing it letter. Kinda nice to see

it on the list.

I'm waiting!

72

Dale LeDoux  
Bath Electrical Systems  
Power Specialists -- 480 V to 230 KV  
KD5QI

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Dan Keen <70731.722@compuserve.com>  
Subject: [243] Aluminum tubing source  
Message-ID: <960921013709\_70731.722\_EHM94-1@CompuServe.COM>

The ham radio mailorder outfit called Texas Towers (800)-272-3467 called a few days ago to say that they finally got a large shipment of aluminum tubing in from their suppliers. And so at long last they now have all of their catalogue listings in stock.

Rcvd 8 pieces each six feet long of .058 wall tubing in sizes 1-1/4, 1-1/8, 1, 7/8, 3/4, 5/8, 1/2, 3/8. Priced from \$7.80 for largest to \$2.70 for smallest. Shipping/handling was 9 bucks. Six feet long is the longest UPS will deliver.

On bathroom scales all 8 pieces together seemed to weigh about 8-1/2 pounds. The six smallest about 5 lbs. The four smallest abt 3.

The main thing I wanted to say here is that although the tolerances were nice and tight, each telescoped into the next size velvety smooth. Which was a pleasant surprise.

The ATT operator could not find the 800 number above listed under Texas Towers nor under RF. Had to fish it out from their catalogue.

Dan Keen KN6TM

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Joe Gervais <vole@primenet.com>  
Subject: [216] Antenna Analyzer Questions  
Message-ID: <199609200750.AAA08423@primenet.com>

Hi Folks,

It's after midnight, I have a ton of design/documentation due in the morning, and some faceless sysadmin in another building just shutdown the network with only 30 seconds notice. No hint as to when I can get my filesystem back. Arrrrgh!!! Only one thing I can do - bug you guys. :-)

I've been thinking of buying an antenna analyzer (either the MFJ or the Autek) and wanted to collect some opinions of these two brands as well as of antenna analyzers in general.

My main use for the beast will be to determine resonant frequencies of my antennas (I'm a chronic antenna tweaker), and to that end the Autek seems to have an edge in price. Plus the Autek claims to be able to automagically "slew" to the frequency of lowest SWR, thereby saving me a bit of effort here and there. Quality is a concern though. The MFJ is larger and about US \$100 more. Do you get what you pay for?

As for analyzers in general, where's the best point from which to measure an antenna's resonant freq(s)? I assume you'd want to measure at the antenna base in order to remove any effects the feedline may have. Then once you've got the antenna cut right, add in whatever length of coax you need (assuming generic dipoles, raised verticals, etc.).

So what do you folks think?

Sorry if I don't reply for a few days - I'm due to go comatose as soon as this latest 6-pack of Jolt Cola wears off. But your collective help will be greatly appreciated. Thanks.

Cheers de KC7NEV,

-Joe, vole@primenet.com, AZ ScQRPion #7

Somewhere in the depths of Network Maintenance Hell....

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Gary Surrency <gsurrenc@ix.netcom.com>  
Subject: [233] ARK30 BCI rejection mod (LONG)  
Message-ID: <3242D499.178C@ix.netcom.com>

Gang,

Here is the fix I learned of from S & S engineering to cure the BCI image problem on my ARK30 as I earlier posted on this list. The filter design is Dick's, the construction design my own.

-----

It seems a 21.8 MHz weak product is leaking thru the LO and mixing in the DBM (double balanced mixer) with a broadcast station at 9.8 MHz to produce an unwanted IF frequency at 12.0 MHz. This is slipping thru the IF xtal filter to beat with the BFO and creates a heterodyne that varies with the RIT control. This explains why the RIT changes the tone of the heterodyne since it varies the translation oscillator at 21.8 MHz, but the normal frequency tuning thumbwheels have no effect on the tone, since they move the synthesizer frequency that is correctly at 22-22.15 MHz, the desired LO output.

9.8 MHz is only about 300 KHz removed from the desired bandpass of 10.1-10.15 of the 30m band. So the offending signal is still on the slope of the original bandpass filters' rather broad skirts and gets into the rcvr mixer when band conditions permit strong BCI. The new filter is said by Dick at S&S to have about 50db better rejection of the 9.8 MHz station because of a better shape factor.

-----

The first step is to remove all the original components of the second stage bandpass filter that follows the RF amp. I suppose the first bandpass filter could be replaced as well, but the second one seems a little easier to access and works well when finished. If anyone wants to change the first bandpass filter too, let me know the results.

I carefully removed all the original bandpass filter components from the PCB board using a heated desoldering tool (Solder Scooter) and Solder Wick. It was a little difficult to get the tabs of the Toko inductors to release from the ground foil, but I succeeded without any damage to the board.

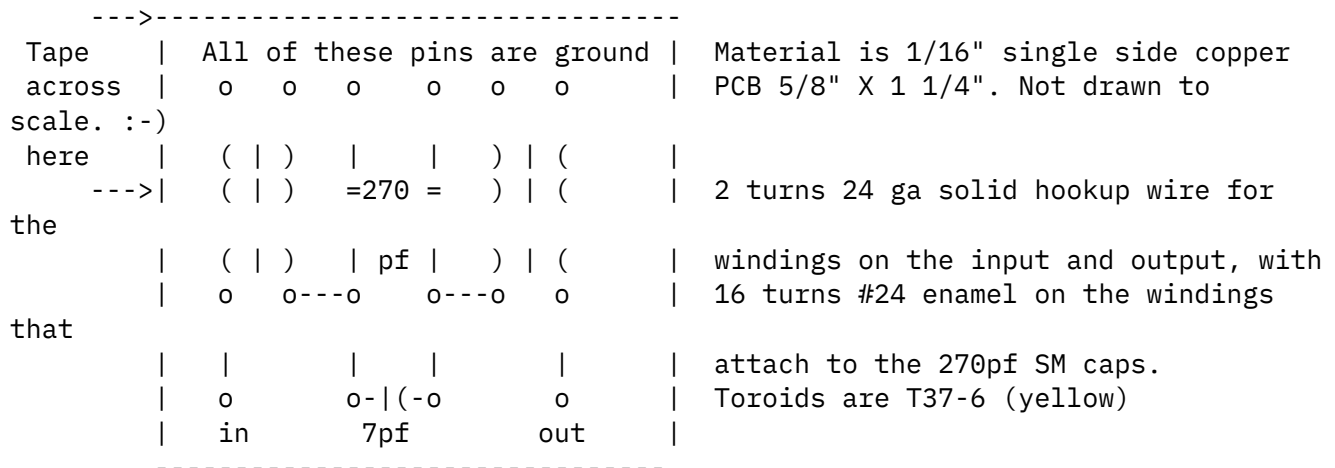
I jury-rigged the toroids and 2 270pf SM caps and a 7pf disc cap together before permanently mounting them in the xcvr. I put a 47 ohm resistor across one of the 2 turn links, and attached the other 2 turn link across my MFJ-259 antenna analyzer using very short leads.

I had to use a pair of silver mica (SM) 270pf capacitors because the ceramic disc ones I had were too far from 270pf to resonate with the 16 turns. The small 7 pf disc came from a Radio Shack picofarad pack assortment of capacitors, R/S pn. 272-806.

Using the MFJ-259, I could see a small dip in the SWR reading at 10.12 MHz, and the resistance meter showed close to 50 ohms to begin with. I then adjusted the toroid spacing until I got a 1:1 SWR and 50 ohms on the resistance meter. It was very touchy to adjust the windings when I got both toroids close to resonance, indicating a sharp rolloff in the pass-band. I figured this procedure would insure I had gotten close to the desired adjustment before incorporating the new filter in the xcvr.

After a quick test to see if the rcvr would hear signals, I set about to make a small PCB to mount the parts on so the new filter would stay put and compliment the design S&S did on the rest of the unit. I used dry transfers to make the board and then etched it with ferric chloride.

Here is what I came up with: (Diagram best viewed with Courier fixed-font)



The PCB I made was thin 1/16" one-sided PCB, mounted copper side up. Nearly half of it is masked by tape when etched so a ground foil exists to the mid-point from the edge opposite the in/out pads. This allows all of the ground connections to be

made for the inductors and caps to a low impedance ground, and allows the use of three thru-board jumpers to be made to the ground foil of the xcvr PCB by marking holes on the new PCB while holding it against the xcvr PCB in place before the components are mounted to it. A little adhesive, (or an assistant) helps keep it from moving around when marking the holes. Then it was drilled on the workbench.

Double-sided foam tape was used to hold the board in place. I mounted all the parts

and soldered them to their corresponding holes. Then, I turned over the little board

and clipped the leads short and filed them flush with the PCB surface so they would

not short thru the tape to the traces of the xcvr PCB.

I was careful to measure the board so it would just fit between R6 and L2 on the xcvr PCB, and left the width of the ground foil trace on the edge of the xcvr board to the edge of the little PCB modification. This insured no interference to the cabinet when assembling the case. There is just enough room to fit the parts onto the little PCB and have it line up with the required traces on the xcvr PCB.

I removed C19 and used a .01uF 50v disc in its place because the original part's leads were too short to reach the new PCB's input pad. Similarly, I used another .01uF 50v disc at the output pad to the pad where C14 was originally mounted. A jumper would have worked here, too, but I chose the cap since it was the right lead spacing and figured it helped maintain symmetry to the filter.

Applying a weak signal at 10.12 MHz, I adjusted the filter so the passband would be centered there and put the interfering 9.80MHz BC station well outside the filter's skirts. I also peaked the first bandpass filter at 10.12 MHz.

I found it much more accurate to remove U5, the LM324 IC, thus disabling the AGC and then used a VOM to measure about -0.3VDC on the 0.6VDC scale as I moved the turn spacing on the new filter's toroids to pull it onto frequency. It wasn't off very much from the original adjustment using the MFJ259 antenna analyzer. With the signal source still applied to the antenna input, I also peaked the trimmer on the IF amplifier toroid to insure it was on frequency.

I haven't had any more BCI from the 9.80 MHz station so far. A few nights with good propagation confirmed the improvement. I haven't had any problem hearing weak QRP stations using the new filter, so I suspect it doesn't have much loss.

If anyone does this mod, please let me know how it worked for you. Or, if you have a question or need help on the construction, I will be glad to help. A filter of this design could be adapted to other QRP radios. This one is very similar to the bandpass filter used in my TAC-1, and it doesn't seem to be plagued with any BCI on 40m with only one filter stage. :-)

vy 72/73,

--

Gary, AB7MY QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Randy Kaufman <krandy@hubcap.clemson.edu>  
Subject: [218] Butternut HF6V Docs  
Message-ID: <199609201228.IAA20299@hubcap.clemson.edu>

Hi all!

Saw someone asking questions about the Butternut HF6V antenna. I have scanned the docs and can email to anyone in need of them. Also have the illustrations and can send them in .jpeg, .pcx, or whatever.

Happy QRPing!

Randy WD4LUJ  
krandy@hubcap.clemson.edu

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: John Dorson K2JHU Real Estate Consultant <jdorson@bbs.mpcs.com>  
Subject: [217] FS Fairness  
Message-ID: <199609201140.HAA30783@bbs.mpcs.com>

Hey everyone the only ones who are complaining about are the CRYBABIES on this list.

I think we for the most part are in agreement and should stop wasting computer time/space for this topic. As far as those who use company time and facilities for their own pleasure, you should be fired and the job given to someone who wants to and needs to work...

John Dorson Real Estate Consultant in Brevard County Florida  
E-Mail To: jdorson@bbs.mpcs.com

```
-----
| Trying for WAS -      AL,AK,AZ,AR,CA,CO,CT,FL,IL,IA,KS,KY,LA,ME,MD,MA|
|                      MI,MN,MT,NH,NJ,NY,NC,ND,OH,OK,OR,PA,RI,TX,VT,VA|
|                      WA,WI                                         |
|-----|
```

K2JHU only QRP... CQC #351, GQRP # 9092,

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Roger Traylor <traylor@ECE.ORST.EDU>  
Subject: [208] G-land article on 3rd method of SSB  
Message-ID: <199609200435.AA012624131@holmes.ece.orst.edu>

Guys,



I'm looking for an article supposedly printed in:

The Radio and Electronic Engineer  
Vol 43, No. 3,  
March 1973  
pp209-215

This article (unnamed) describes a receiver built using the "AC-coupled" version of the Weaver method. I suspect that this is a publication done in the UK as it was mentioned in the RSGB Radio Communication Handbook.

For those who are not familiar with this RSGB publication, I see it as the RSGB version of the ARRL handbook. I have found it to be a very valuable addition to my technical bookshelf.

Thanks in advance,

Roger Traylor  
WB4TPW

"Hopefully raising the S+N/N ratio on qrp-l."

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: kf2ph@juno.com (Nick Franco)  
Subject: [251] G3RGD from the car  
Message-ID: <19960920.223103.9974.7.kf2ph@juno.com>

Hi Gang,

Yeah, I know TMPS is over, but I'm not ready to take the SW-30 out of my car. Today on the way home from work, I heard G3RGD calling CQ. I gave him a shout back not really expecting a return. He asked KF2 ?? I came back a couple of times with my call KF2PH/M QRP

Well I guess the propagation was with me today. I worked Ray - G3RGD while driving home from work on Long Island with 2 w on the SW-30 and my HB paddles. This stuff just gets me crazy! I love it.

72,  
Nick - KF2PH

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: duane <duane@flinet.com>  
Subject: [211] ham posting  
Message-ID: <3242275C.682E@flinet.com>

I hope you will pardon this message it is sort of qrp releated.  
I have designed a form on my web page that will allow hams to post  
request for qso, post where you will be operating from, date times, band  
and type of operations (cw phone digital ect). anyways the problem I'm  
having is allowing someone to fill out the form and getting it to post  
the message as entered by the user to my web page automatically. if you  
can help please email me, if you need a copy of the form itself, i can  
do that too. I know a little about html I wrote my own pages but i'm not  
to up on forms and postings.  
thanks duane AB4BE QRP-L #710  
<http://www.flinet.com/~duane> the form will be under CQ-CQ link

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: "Thomas J. Whalen" <whalen@swcp.com>  
Subject: [245] hf6v mount on roof  
Message-ID: <Pine.SUN.3.91.960920203023.8613B-100000@kitsune.swcp.com>

Someone wanted to know how I mounted my Butternut on the roof. It was  
pretty easy. Just get a 2x4 and cut one piece about 8 in long and another  
piece 6 in long. Glue and nail the 6 in piece on top of the 8 in piece.  
The 8 in piece is the base part, and the 6 in is where you drill a hole  
about 2 in from the bottom and this is where you drill a hole in the  
bottom ground section of the vert and put a bolt thru it and the hole in  
the 6 in piece. I just use sheet rock nails to secure the thing to the  
roof. Then all you need is a 3 or 4 way guy system. Wind or lightning  
gets too bad just go up and let it down. Vert. is sure more effective  
on the roof and away from the lossy earth!!! Need radial.....Get some  
flashing material..usually about 6" wide and comes in 50 ft  
rolls....works great....This scheme should work with any roof mounted  
vert.72 Tom wb5qyt #640

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: "Thomas J. Whalen" <whalen@swcp.com>  
Subject: [244] hf6v on 6m???  
Message-ID: <Pine.SUN.3.91.960920201645.8613A-100000@kitsune.swcp.com>

Well tomorrow is the big day and am ready to go out and make some contacts!!! Hope there is alot of activity and alot of participation. Anyone that owns a Butternut vertical has noticed the 11'3" stub wire on the side of the vertical. The same thing can be done for six meters and works great, although the bandwidth is very narrow. Never the less, it does work. Just cut a wire  $234/f$  + a little to loop back on itself for tuning purposes. Attach the wire about 2 or 3 inches out from the vertical at the  $468/f$  point above the feedpoint of the vert\.. The wire will then hang down, and using fishing line attached to one of the coil brackets. Cut a minimum of 3 radials  $240/f$  at the base of vert. Swr was flat at 52.525 +or- 15khz. Make it longer and you can cover the ssb and cw portion of the band. How about was on 6m cw during this next cycle!!! 72  
Tom WB5QYT QRP-1 #640

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Paul Harden <pharden@aoc.nrao.edu>  
Subject: [234] I'm Back (long)  
Message-ID: <199609201825.MAA27011@zia.aoc.nrao.edu>

Gang,  
It has been the mother-of-all-summers (sorry, Saddam) for me the past two months and I have been out of town for most of it. In fact, I had to postpone QRP-L and unpostponed (REponed?) it just yesterday. I have numerous emails waiting for me wanting to know what happened to me. Geez, thanks for the interest. I'll try to catch up on other personal email shortly and those asking technical questions. Hope my answers won't be too late.

I was sent to fill in at a couple of our remote sites so the normal fellas could take some vacation. Then to Georgia to help my son buy a house (he's stationed at the Kings Bay, GA Submarine Base) and dodge hurricane Fran. He returned with me and got married to his high school sweetheart this past saturday, and got him moved out and back to Georgia this week. We are also quite busy at the observatory right now as Warner Brothers is here tearing this place to pieces and building props to film the movie CONTACT, by Carl Sagan. Actual filming starts next week with Jodi Foster as the director of the VLA! Needless to say, QRPing has taken the back burner past many weeks.

But jumping back into it tomorrow for the NE QRP Afield. Tim Pettibone AB5OU and I will depart Socorro tomorrow for New Mexico's Light House, where we will meet Jay Miller WA5WHN and others. Hope to work you all. Photos (of NM light house) at 11.

Over the next few weeks, have several things to post to QRP-L.

1. Built the St. Louis tuner and developed a rough calibration scheme to measure xmtr output power on the forward meter.
2. Have tested several Wilderness NorCal 40a's and need to post the lab tests. It is encouraging to see such consistent performance between these units, inspite of being built by different people.
3. Just about done with the Kanga U.S. GQ-20.
4. Also tested and used one of Bill Kelsey's (Kanga U.S.) Mini-R2 direct conversion xmtrs. Nice rig, and that phasing scheme to eliminate one of the sidebands really works great. Will post the lab tests on that shortly.
5. Have a couple of other rigs recently lab tested to post the data.
6. Between several of us, I think we have cured the thumping problem some people have encountered with EmTech's NW8020 rigs. Turned out to be a batch of bad (leaky diodes) used on the key line. The NW rigs are nice rigs, and will post the fix on the thumping shortly. I have mine and 2 from Preston Douglas now fixed and will give them a checkout on 20 and 40 tomorrow during the contest. (Hey, they put out a full 5W ... I'm going full gallon for this one -hi).
7. Received my KC-2 from Wilderness, but thus far have only admired the parts, board, layout and the logic/schematic. Can't wait to build that puppy and report on it. Hardest part will be to decide which one of my rigs will be lucky enough to get the KC-2 installed. Will test it out good and post the results. Nice article on it, BTW, in the current QRPp (photo of it on the front cover).

Sorry for the bandwidth, but I'm alive and well (just broke after the wedding) and have numerous projects to catch up on and will be posting this stuff to the group before long. Also looking forward to my trip to PacifiCon in October.

Get on the air this weekend for the contest and have some fun ...

72, Paul NA5N

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996

From: Mark\_Korchinski@isdtcp3.hwc.ca

Subject: [222] IOTA

Message-ID: <9608208432.AA843238765@isdtcp3.hwc.ca>

I am looking for some info about IOTA (website, ftp, or telnet sites are fine)

There are a number small islands in the Ottawa River which are within a few minutes of my QTH, and it might be interesting to activate a QRP

station from one during a contest or for award purposes.

For a starter, are fresh-water islands even eligible?

73,  
Mark VA3ZU

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Marshall Emm <75230.1405@CompuServe.COM>  
Subject: [224] LAST Explorer  
Message-ID: <960920155955\_75230.1405\_HHB36-2@CompuServe.COM>

Gentlemen--

I have ONE left-- first come first served. Re-post follows.

73  
Marshall  
AA0XI

Copy of: Explorer II - Last Chance

As many of you know, the Oak Hills Explorer II has been superseded by the OHR100. The 100 is a great kit and a great rig, but then again it's another \$60 as compared with the EX2. The Explorer II is destined to be one of the "classic" QRP rigs, and if you haven't built one you really should!

I've obtained the very last few Explorer II's from Oak Hills, all on 30M, and still at \$99.95. You guys get first crack at them. Shipping is \$5.50 which covers Priority Mail delivery. To order yours, call me on 1800-238-8205, or send an e-mail credit card order to me at 75230.1405@compuserve.com or via my web page-- <http://ourworld.compuserve.com/homepages/mtech>

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Marshall Emm <75230.1405@CompuServe.COM>

Subject: [240] Last Explorer

Message-ID: <960920225610\_75230.1405\_HHB62-1@CompuServe.COM>

The last Explorer II has been sold-- thanks, gentlemen, and I hope those who bought them have as much fun building and using them as I have.

I seem to have cornered OHR's last remaining stock on another superseded rig-- watch

for an announcement next week! I'll see if I can think up a way to handle them that's fair to those who don't get the List in realtime.

73

Marshall

AA0XI

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996

From: Marshall Emm <75230.1405@compuserve.com>

Subject: [225] Learning Morse (Long)

Message-ID: <960920160005\_75230.1405\_HHB36-3@CompuServe.COM>

The following article came my way recently and I thought it might be of interest to the group (copyright notice at the END allows for this redistribution). As the author of CODEMASTER V, I'd like to point out that the Basic Training module in Codemaster is a variation on the Koch technique, and the full method, exactly as described in the article, can be implemented. Any CM5 users who want to know how can write to me privately for the relevant instructions.

About the only thing in the article that I would argue with is the contention that listening to live Morse is useless.

73

Marshall

SO YOU WANT TO LEARN MORSE CODE

How to Avoid Frustration, Minimize the Pain  
And Gain Full HF Privileges

By David G. Finley, N1IRZ

Copyright (C) 1995 All Rights Reserved\*

Most of what you've been told about learning Morse Code is wrong -- dead wrong. Amateur radio operators traditionally have used the slowest, most

frustrating, most painful and least effective techniques possible for gaining code proficiency. It's no wonder that the 13- and 20-word-per-minute requirements for full HF access are considered a nearly insurmountable barrier by many hams.

You can overcome that barrier. You can do it in a reasonable amount of time and with a minimum of frustration and pain. In order to do so, you must approach code training from a different perspective and use different techniques from those common among amateurs for the past half century.

It will require work. You will have to commit yourself to at least one 15-30 minute training session every day until you reach your goal. You may succeed in a month or in several months; individuals differ greatly. Without this commitment, however, you may as well not bother.

So what's new here? By using a code training method devised by a psychologist some 60 years ago, you will progress as quickly as you possibly can, with ample reinforcement and little frustration. By understanding this method and how it builds your code proficiency, you will know why you have to spend time practicing and you'll be able to make a reasonable prediction of how long the total effort will require.

We're going to start on your road to success by throwing some time-honored ham-radio traditions onto the trash heap where they belong. These are:

Slow (5 wpm) code -- It ought to be illegal to teach anyone code at 5 wpm. Every minute spent toying with 5 wpm code is irrevocably wasted. In addition, as we'll see later, starting with slow code is a virtually-guaranteed path to frustration and quitting. Morse at 5 wpm and Morse at 15 or 20 wpm are completely different critters, and you don't want to waste time on the wrong one.

Charts, mnemonics, musical cues and other "memory aids" -- These things make you think about what you're doing while trying to copy code. That is deadly to proficient copying.

Code tapes -- In very short order, and unconsciously, you'll memorize the tape. This will lull you into false confidence in your ability. That false confidence will be quickly shattered when you hear transmitted text that you haven't memorized.

Copying QSOs off the air -- You don't know the speed of code you find on the bands, and much code on the air is pretty badly sent. All this makes it useless for training purposes.

Now that you know what you're NOT going to do, let's start examining just how you can best gain code proficiency.

The Mechanics: Just what is code training, anyhow?

Go to the shack of a veteran CW operator, or visit the CW station at a club Field Day operation. Watch people copy and send code at 30 to 35 wpm. You'll notice they're pretty relaxed about it; they're not sweating each character as it comes out of the speaker and they're not racking their brains to "figure out" what's being sent. Code has become second nature to them.

That's the key to code proficiency. Copying code must be a thought-free process. When you hear a character, you should know, without thinking, what it is. It should be a REFLEX. In fact, copying above about 10 wpm can only be done by reflex. Above that speed, thought processes are too slow to succeed.

That's why slow code is a deadly trap, and why traditional amateur methods of code training are so painful and frustrating. Most hams are told to memorize all the characters, then start building their speed. When you do it this way, you build a "lookup table" in your brain, comparing each character you hear with those in the lookup table until you find a match. This process shuts down from overload at about 10 wpm. That's why people experience a "plateau" at 10 wpm, and don't see any progress for weeks or months.

Those who finally get over that "hump" and progress beyond 10 wpm do so because, through constant practice, they have begun to copy code by reflex instead of by thought. They are the lucky ones; this 10 wpm barrier is where many folks give up out of frustration.

Code training, then, should completely bypass the lookup-table phase and begin by building copying proficiency as a reflex. This was recognized in the 1930s by a German psychologist named Koch, who devised the most efficient method known for Morse training. It's his method, and how you can use it, that we're going to examine in detail.

#### Morse Training by the Koch Method

Koch's method is a simple, direct way of building reflexes. However, it requires either a computer and Morse software or a personal trainer. That's why it was overlooked for so many years. Now that computers are commonplace, it should become the standard Morse training method. Here's how it works:

You start out by setting up your computer to send you Morse characters at 20 wpm and at an overall sending speed of at least 15 wpm. You then get out your paper and pencil and have the machine start sending -- but only two characters. That's right, for your first sessions, you'll only have two choices. Copy on paper for five minutes, then stop the machine and compare what you copied with what the machine sent. Count characters and calculate your percentage of correct copy.



If your score is 90 percent or better -- congratulations! You just learned your first two characters, and, importantly, you learned them at full speed. You'll never have to learn them over again. If you didn't make 90 percent, practice some more. As soon as you can copy the first two characters with 90 percent accuracy, add a third character to your practice. Your accuracy will drop as you work on assimilating the new character, but it will rise again to 90 percent or better. Then you add the fourth character, and so on.

This method does not allow you to build that lookup table in your brain. To copy at full speed, you MUST build the reflexes in order to achieve 90 percent accuracy. And that's what you're spending your time doing -- building reflexes. Think of it as a parallel to perfecting a tennis swing or mastering a gymnastic routine; you're practicing until you get it right. The Koch method of building code proficiency character-by-character is similar to standard methods of teaching touch typing, another skill that must be reflexive.

This is a very individual method of training -- you progress at your own best speed, and spend only the time required to gain each new character. This means that you will waste no time in reaching your goal.

How much time is required? That will depend on the individual. Koch himself, with hand-picked students, got a group to master 12 wpm code in a mere 13.5 hours. You probably won't match that, but that's much faster than any other method in the psychological literature. You can get an idea of how long it's going to take after you've mastered a few characters. Keep track of your training sessions (some software will do this for you) and calculate your hours-per-character rate (or characters-per-hour if you're really fast!). That, multiplied by the 43 characters in the amateur Morse test, will give a rough idea of how long it's going to take.

While the Koch method is the fastest method of Morse training, speed alone is not its principal advantage. Its principal advantage, and a major difference from other methods, is that it provides you with constant positive reinforcement. This begins with your realization, after mastering the first two characters, that you CAN copy code at 15 or 20 wpm, because you just did it. After that, each new character mastered is further proof of your progress. Contrast that to slowly trying to build speed up from 4 or 5 wpm, then hitting the plateau at 10 wpm and seeing no progress for a long time. With the Koch method, frustration is at a minimum.

Constant testing is necessary to ensure that you maximize the effectiveness of the Koch method. You must copy on paper, so you can grade yourself. Remember, if you score 90 percent accuracy or better, add another character. If you score any less than that, try again. By constantly testing yourself on continuous copying of at least five minutes, you know exactly how you're doing and exactly when you should add another character. This results in the fastest progress possible.

Naturally, with the Koch method, you'll be copying random groups of characters, rather than words, until you've mastered the entire character set. If your software allows, make these groups of random length, rather than a constant stream of five-character groups. This will ease the transition from random groups to actual words. Yes, there is a difference in the rhythm and "feel" of words and random groups. Once you've become accustomed to copying words, you should start copying sample QSOs, which are the format of the amateur tests. Pay special attention to callsigns, locations, and numerals; these are the types of things that can form questions on the test.

As you proceed toward your goal, remember that some days are just going to be better than others and some characters will take longer to assimilate than others. You know, however, that you can reach your goal because you've already mastered some characters and proven that copying at full speed is something you can do. Keep in mind that what you're doing is building reflexes, and that takes time. The amount of time you require has nothing to do with your intelligence; it's just how long it takes for characters to "sink in" and become part of your reflexes.

So there it is -- your path to passing the 13- or 20-wpm code test. After you've used this method, and start enjoying the wonderful world of HF radio, try a few CW QSOs. With Morse code developed as a reflex, you may just find that you really enjoy using it on the air. After all, you've gained proficiency without the frustrating ordeal that most hams have endured for decades. See you on the HF bands!

#### Bibliography

Finley, D.G., "Reducing the Barrier: Effective Morse code training," Radio Fun, May 1995, pp. 14-15.

O'Keefee, V., "Learning Morse," QST, August 1972, pp. 58-62.

Peak, H., "Koch's Method of Learning Code Reception," Psychological Bulletin, XXXIX (1942), p. 495.

Taylor, D.W., "Learning Telegraphic Code," Psychological Bulletin, XL (1943), pp. 461-487.

Taylor, D.W., "The Learning of Radiotelegraphic Code," American Journal of Psychology, LVI (1943), pp. 319-353.

#### A Personal Note

These ideas may sound very bold and unconventional, but I know they work, because they worked for me.

I fell in love with radio in grade school, but was kept off the air for 30 years because I found traditional code training just too frustrating. During those decades, I tried several times to learn Morse, but every time gave up

in frustration and disgust -- my progress was just too slow.

In 1991, I became one of the first 500 people to enter ham radio by way of the no-code Technician license. After becoming bored with repeaters and HTs, I decided to make one last attempt to master the code. Fortunately, I stumbled on information about Koch's method, and found that it was the only thing that would work for me. In 1993, after diligent work at my computer, I took my first code test and passed the 20 wpm exam on the first try.

I became very curious about why Koch's method had worked for me when all else had failed. That sent me to libraries to read the now-aging psychological literature about Morse training. I soon realized that the Koch method achieves its speed through directness; if you want to copy reflexively at 15 or 20 wpm, then just start building those reflexes from the start. I also realized that it provides much more positive feedback than any other method, so you can keep your motivation and a "can-do" attitude throughout your training.

This was knowledge I wanted to share with others, so I began giving lectures to amateur groups on the topic. I quickly found that, after my lectures, "old-timers" would come up and tell me that my ideas on the need for reflexes were absolutely right. Many said that the Koch method sounded similar to the intense code training they had received in military schools.

Probably the only reason Koch's method didn't become standard back in 1936 when he first published it was that the average individual had no way of implementing it. The personal computer has changed that, and the time has come for the Koch method to replace all others. I hope that the speed and positive-reinforcement aspects of the Koch method can cut down the code barrier to a much less formidable size.

Sometime during 1993, those who have not passed at least a 13-wpm code test became the majority of radio amateurs in the United States. While the debate over the code requirement continues to rage, I hope that use of the Koch method can help many more people overcome the barrier and enjoy full HF privileges right now, instead of several years from now when the requirement may be lifted.

I cannot overemphasize my dislike -- even hatred -- for 5 wpm code. As I've outlined above, it is highly counterproductive to gaining proficiency at higher speeds. In order to go from 5 to 13 wpm, you have to start over again, even though you may not realize that while you're doing it. The worst aspect is that many people pass a 5-wpm test, then never go beyond that. They are trapped in the ghetto of the Novice/Tech HF bands. Why waste your time learning a skill (slow code) that has no relevance to real (13+ wpm) code proficiency? Why limit your HF operating to the most unattractive parts of the amateur bands?

Finally, as I was using the Koch method and building my code skills, I intended to forget the code as soon as I passed the test. My 30 years of frustration had built up a bitterness about CW. However, about two weeks after getting my first HF rig on the air, I looked at my straight key and decided to try a CW QSO "just so I can say I did it." Guess what? I enjoyed it. My second CW QSO was with a DX station, and I was hooked. With the encouragement of a CW Elmer, I continued to enjoy the bottom parts of the bands, and now my microphone isn't even plugged into the rig!

If the Koch method could overcome three decades of bitterness and turn me into an enthusiastic CW operator, I think it's certainly worth a try on your part. Have a go at it. Maybe I'll find you on the CW bands and we can have a ragchew.

Best of luck, and 73.

Dave Finley, N1IRZ

\* This article is copyrighted by the author. Permission is hereby granted to transmit and distribute it by electronic means and to store it on electronic bulletin board systems, and for individuals to download and print copies for noncommercial, personal use, provided that the article is transmitted, stored and printed unaltered and in whole, including this notice. For any other use, written permission from the author must be obtained.=20

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: John Fletcher <johnf@innotts.co.uk>  
Subject: [214] Lost messages  
Message-ID: <199609200626.HAA27844@carlton.innotts.co.uk>

Hello All,

When I logged on to collect my mail at 06:00z on Friday 20th September there were 57 messages incoming. My computer crashed during the download so I logged on again and received the last 11 messages. My HP-67 tells me that 46 messages were lost. (46.00 actually!) So if anyone sent messages to me between 06:00z on 19th and 06:00z on 20th, please would they send them again as they might be among those lost. Many thanks,

John G4EDX

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Dan Keen <70731.722@CompuServe.COM>  
Subject: [246] New Thread Title  
Message-ID: <960921024422\_70731.722\_EHM77-1@CompuServe.COM>

Thanks John KC5MOE (and to others via Email) for the kind words.

But most embarrassing it was for me to see that your post was direct from the list. Because the message you replied to was intended by me to go out via private email instead of to a public list. Your message made me realize that I had accidentally posted public.

I changed the thread title above to help keep everybody on the list happy!

Great call you have.

BTW, I liked the old ARRL mnemonics better then the new International ones. Like Omaha, Baker, Victor, George and so forth.

Dan KN6TM

70731.722@compuserve.com

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: JEVERHART@cayman.vf.mmc.com  
Subject: [230] NJQRP QRP Afield Participation  
Message-ID: <960920125542.20208058@carib.vf.mmc.com>

QRP Afield devotees:

OK, the magic hours are approaching and WE ARE READY! Yes, a QRO affirmation that the NJ-QRP'ers will be out in force (or was that farce?)

Because New Jersey is so spread out ;-), we are dividing our effort. We will have a representation split between North and South, on two islands and the mainland.

The largest group will be off the coast at Sandy Hook, near a number of historic lighthouses. We expect the following participants:

Call	Name	Will Participate	Band capability
------	------	------------------	-----------------

N2SMH	David	Yes!	20M at least
N2TNN	Dean	Yes, after carpentry	
KA5DVS/2	James	Yes with gel cells	
KG2DP	Bill	?	
N2CX	Joe	Yes, armed with PVC	40-10
WA2ECP	Vince	Yes ('til 2pm)	20M
W2GUM	Tony	Yes!	Doubless well prepared
KA2UPW	Doug	? schedule permitting	40m - maybe from home QTH

To the North, Kevin, KB2TE0 will be operating from another island location - NYC. Well at least it's line-of-sight to NJ! He has lots of towers in view, like the Empire State building and the World Trade Center twin towers.

And our Southern Contingent will be manned by Ken, N2CQ and Herb, K2HPV. They will be operating from Mulliica Hill, NJ. No lighthouses, but the Gloucester County ARC tower is on the site and there \*is\* a cell-phone tower nearby.

We also expect some drop-ins on Sandy Hook. Come out and watch, bring your rig, or operate one of our stations. We welcome visitors. For those needing directions drop me an e-mail at:

[jeverhart@cayman.vf.mmc.com](mailto:jeverhart@cayman.vf.mmc.com)

today or at

[n2cx@voicenet.com](mailto:n2cx@voicenet.com)

tonight.

On Sandy Hook we will be operating at Ft. Hancock near the Northern end. Coordination for finding us will be on 146.52 simplex (QRP, of course). vince, WA2ECP and Tony, W2GUM expect to be at the Visitor Center at 10 am.

For those not fortunate enough to be able to operate from the Garden State, look for us on the air and we'll be glad to work you!

72/73,

Joe E., N2CX

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
 From: PDouglas12@aol.com  
 Subject: [223] Pacificon Badge List 9/20/96  
 Message-ID: <960920104020\_289193384@emout20.mail.aol.com>

Ladies/Gents,

Here's the list, up to date as of this Friday 9/20/96. I will post the list weekly until about one week before Pacificon, then I will print and send them on to Doug Hendricks for distribution at Pacificon. The badges are free for members of QRP-L or NorCal. Just email me your request with full name and call.

72,

Preston WJ2V

ADAMS	CHUCK	K5FO
ADAMS	DAVID	N9UXU
ANDERSON	JEFF	WA6AHL
ANDREWS	JOHN	N5INZ/6
ARMSTRONG	TED	KA6LCL
BENNETT	JIM	N6PDX
BURDICK	WAYNE	N6KR
BURKE	ED	KI7KW
CATES	JIM	WA6GER
CLEVELAND	GROVER	WT6P
DUNDAS	JOHN	AB6DG
FLUSCHE	TONY	AB6BR
FURMAN	SYD	W6QWK
GIPE	MICHAEL	K1MG
GOLDSTEIN	STAN	N6ULU
GRAHAM	DWIGHT	WA6NAE
GRUDIN	JEFF	AC6KW
HARDEN	PAUL	NA5N
HARTFORD	CAM	N6GA
HENDRICKS	DOUG	KI6DS
JONES	DARREL	WD6BOR
PARKER	JERRY	WA6OWR
PEASE	ROGER	KE6PPI
PHILBIN	D.K.	OZ2DKP
POLIZZO	PHIL	AC6LS
QUADROS	JOHN	KB6DLN
SAMMUT	CHARLES	K8MI
SLAVENS	DICK	WA6TMF
SPITTLE	DERRY	VE7QK
STANFORD	LEE	KM6LA
STARK	RON	KU7Y
SWARTZ	ERIC	WA6HHQ
TELLEFSEN	BOB	N6WG
WOOD	MIKE	N6MVE
WRIGHT	VERN	W6MMA

YARNES     DAVID     W7AQK

From owner-qrp-1@Lehigh.EDU   Fri Sep 20 23:12:51 1996  
From: ccashion@spdmail.spd.dsccc.com (Charles Cashion)  
Subject: [236] postpone  
Message-ID: <9609201923.AA28329@sun1055.spd.dsccc.com>

postpone

From owner-qrp-1@Lehigh.EDU   Fri Sep 20 23:12:51 1996  
From: "Thomas J. Whalen" <whalen@swcp.com>  
Subject: [248] QRP AFIELD FUN!!!  
Message-ID: <Pine.SUN.3.91.960920205124.8613E-100000@kitsune.swcp.com>

Looking forward to the contest!!Will try to light up the ionosphere with 2 watts out of a Argo. into a 132' kite supported vertical. Just bought the kite and hope it will fly!!! I know one thing Riley, NM is no place for kite flying....50mp+ winds....that breaks kites quick!!!Lets see, 2 wavelengths on 20 .....one wavelength on 40.....!!!! Yes, the wind always blows in New Mexico!!! I bought a bigger kite, so bring on the wind and lots of contacts !!!!! Have fun tomorrow all !!! Tom WB5QYT

From owner-qrp-1@Lehigh.EDU   Fri Sep 20 23:12:51 1996  
From: wa5whn@juno.com (Jay D Miller)  
Subject: [228] QRP AFiEld/Torreón, NM/Sept. 21, 1996  
Message-ID: <19960920.105455.4447.1.wa5whn@juno.com>

Dear Fellow QRP AFiEld Participants,

Oops, forget to mention the callsign, that we will be abusing. It will be NA5N (famous or infamous, depending upon who is telling the story). So, @ 1600 UTC, Sept. 21, live from Tower, New Mexico, 3 elements pointed towards New England (14.058 MHz +/- QRM, probably more - ), the contest begins. Did anyone check out the Propagation forecasts ? Let's check 10 & 15 meters too.

By the way, the Producers, from "Sesame Street" (Big Bird) had called,



and they are missing a few "R's", did You Guys & Gals in New England steal them again ? ;) Noticed that sign in Texas had read "Ama illo" too. ;)

72...Jay, WA5WHN (NE #454)

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: wk9t@juno.com  
Subject: [238] Solar Cells  
Message-ID: <19960920.163549.24102.4.wk9t@juno.com>

I just downloaded the following article from Tech Web. Thought it might be of interest fellow QRPers.

-----  
73/72 de Rod ... WK9T Carol Stream(Chicago), IL  
Grid: EN-51ww QRP-L # 616 ARS # 153  
E-mail: wk9t@juno.com  
-----

TechWeb (Top Stories)  
Page 1

Solar-cell efficiency is improved

TechWire, Friday, September 20, 1996

Electronic Engineering Times

ATLANTA -- Researchers at the Georgia Institute of Technology say they have pushed the efficiency of multicrystalline solar cells to record highs by finessing the process-sequencing steps and integrating the requisite technologies. The work unites two areas of development with an eye toward bringing down the cost to utilities of generating electrical power using photovoltaic (PV) technology.

In one technique, researchers optimized gettering and passivation techniques for multicrystalline silicon (mc-Si) -- a relatively low-quality semiconductor -- to

nudge maximum conversion efficiency to 18.6 percent, a claimed record. The new process also integrates the cost-effective advantages of rapid thermal processin (RTP) with a simplified screen-printing process for defining metal contacts. Prototypes built with the low-cost process have shown efficiencies as high as 16 percent. The researchers believe the manufacturing innovations will have a dramatic impac on the cost of solar cells. "The ultimate goal is to use a cheap, defective mate such as multicrystalline silicon, and low-cost manufacturing techniques without sacrificing performance," said Ajeet Rohatgi, who leads the project.

Copyright (c) CMP Media, 1996.

The PointCast Network\_

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: ukii@megsinet.net (ukii)  
Subject: [220] Still need 49er Help  
Message-ID: <01BBA6C4.96F28E60@dial123.megsinet.net>

Hello All.

Well,I received a few messages regarding my request for help,both said "you must have heard from alot of 49 owners by now". Well,no,I havent.. I still need some help.

Here was my original problem...

Oh Boy,yes,me again...

I received a few replies about c13 being a bipolar audio cap,so I went ahead and used the one supplied with the kit. I soldered everything,rechecked,and then checked again for solder bridges. I could "see" nothing wrong. I powered it up and heard a VERY faint crackle. I tuned and tuned but couldnt get anything. (yesmI had an antenna on it) I then switched to the dummy load and hit the keyer once,,it has output,but when I released the key, the audio came WAY up. Then I could tune and hear "some" signals. However,I noticed the Final Amplifier got SUPER hot...(i had the heat sink on). I quickly disconnected the battery and checked everything again. I cant see anything wrong here... But when I hook up the battery,the same thing happens over and over..

Low to no audio, hit the key, then loud audio, then the transistor gets super hot... Is this normal? I am using a 9volt battery.

Please, any ideas where to start looking before I blow it up? ANY help would be great...(did I forget to tell ya something?( it is not in a case yet, had it sitting on cardboard, thats it I guess))

Also, just noticed, the ONLY time I can actually hear a signal is if I use a tiny METAL screwdriver and touch C2, the trim cap. I noticed only if I touch the "positive" side of the cap, or anywhere along that line on the schematic. (not the grnd side) I was trying to peak C2, as the book says, but couldn't get my nylon screwdriver in it, so I used my wife's jeweler's screwdriver, metal, and bang, I was hearing CW!!! a K6UU/AA??? anyway, please help me! I am LOST...

I got a reply from WB6TNL who says this may be due to self oscillation. He suggests I put some resistors across the chokes, and check the NorCal page. I noticed that RFC4 (next to the P.A) does not "fit" right on the board. I had to solder it a little higher off the board than the other components because the holes did not align. (problem here?) Also, if I must put resistors in parallel with these chokes, where do I solder them? Under the board?

One final problem... I see (hear) NO difference when I turn R1 (RF Gain). Maybe this is because I am hearing nothing to start with, but even when I had the metal screwdriver in C2, I turned R1 and heard no difference.

So, Please, any help would be greatly appreciated... I really want this first kit to work so I don't get discouraged and quit building...

Thanks you all...  
Best 73 de John  
N9UKX

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: GREGOIRE@ENDOR.COM (ERNEST GREGOIRE)  
Subject: [239] We don't use "aaahs heyaah"  
Message-ID: <199609202250.SAA53599@nss2.CC.Lehigh.EDU>

Hello Gang, Sorry guys but here in New England we just don't use many "R"s.

Anybody can drop a few r's here and there to sound like a "nue inglandahh" but the real trick is to "Put em in wheyah they don't blong in the furst place". As in Aguster Maine.

BTW, we do use .-. for r's in morse code.

73 de  
AA1IK

Ernie

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: w7ls@brigadoon.com  
Subject: [213] Wilderness Radio e-mail address?  
Message-ID: <199609200602.XAA27255@olympic.brigadoon.com>

Yo. Would someone please tell me the e-mail address for Wilderness Radio?  
Please just post it on the list, so I don't get 8 gazillion replies. Many  
tnx de Jim, W7LS

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: JEVERHART@cayman.vf.mmc.com  
Subject: [221] RE: Antenna Analyzer Questions  
Message-ID: <960920090956.20208058@carib.vf.mmc.com>

Joe,

I guess considering the nature of your libations, we should call you "joltin' Joe" ( sorry about that). Bring back memories of final exam days at college. Too much No-Doz makes you a zombie - you are wide awake for days, but too wired to function.

Back to the main subject. I have access to an MFJ-249 that my local club owns as a loner (BTW that's a good thing for a club to do). I also own an RF-1. Which is best for you depends on your needs.

On one hand, the MFJ unit (actually the 259 is more comparable to the RF-1) has a better tuning arrangement and better frequency resolution. It also has a wider frequency range, going up to 170 MHz or so. And it has an analog meter for a more readable peaking or nulling (as in resistance or SWR). It also provides connection to its internal frequency counter so it can be used to read external frequencies - I you ahve 600 mV or so of signal. However it is large and relatively heavy, limiting its usefulness for tower-top or portable use.

The RF-1 is a much smaller unit with a digital display. It shows SWR,

impedance, calculated inductance or calculated capacitance (it measures impedance and displays the inductance or capacitance corresponding to that impedance if it were pure reactance), depending on which of the front panel buttons is depressed. According to the manual, it also enhances SWR reading accuracy by taking into account the non-linearity of its detector diodes for low SWR values. In addition, the RF-1 has a much wider impedance reading range, from a few ohms to about 1500 ohms. The MFJ unit is optimized for readings around 50 ohms.

I have used the MFJ unit for an antenna class I taught at work. It is somewhat more "intuitive" to use for those not familiar with antennas. But I think that the Autek is more versatile at least in part because it can be used on the workbench, too. When I go to QRP Afield tomorrow, I'll take my Autek along!

There is a little more detail on the Autek in a review in the qrp-l archives. And in a review I wrote for the QRP Quarterly a while back.

Reliability of the Autek is very good. I've had no problems in a year and a half of ownership. Others have had problems with an internal pin shorting and reducing battery life, but I've had good luck. The MFJ unit, like most MFJ products I've owned has need occasional repair work. I'm not complaining because I do like most MFJ stuff, but I have to mention it for honesty's sake.

The "automatic zeroing in feature" you speak about may be what a unit from AEA offers. It has an LCD that shows a plot of SWR vs frequency so that you can see a display of the SWR curve. It is more limited, though because it displays only SWR (or return loss). And for what it costs, you can buy both the MFJ and Autek units.

Good luck on your decision and...

72/73,

Joe E., N2CX

work: jeverhart@cayman.vf.mmc.com  
home: n2cx@voicenet.com

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: WD6BOR@aol.com  
Subject: [242] Re: Antenna Analyzer Questions  
Message-ID: <960920192915\_526806362@emout17.mail.aol.com>

In a message dated 96-09-20 03:52:23 EDT, vole@primenet.com (Joe Gervais)

writes:

<< I've been thinking of buying an antenna analyzer (either the MFJ or the Autek) and wanted to collect some opinions of these two brands as well as of antenna analyzers in general.

My main use for the beast will be to determine resonant frequencies of my antennas (I'm a chronic antenna tweaker), >>

Joe,

I've bought both and use both. The MFJ is easier for me to use in the field with an external 12 volt battery. The analog needle makes course tuning a breeze.

The Autek is a little fussier tuning antennas but has the advantage of also measuring inductance and capacitance.

It's only money, buy both. They're great tools.

Darrel, WD6BOR

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: jeffa@ix.netcom.com (Jeff Anderson)  
Subject: [219] Re: Antenna Analyzers  
Message-ID: <199609201224.FAA28693@dfw-ix12.ix.netcom.com>

Joe Gervais wrote:

..  
>the Autek claims to be able to automagically "slew" to the  
>frequency of lowest SWR, thereby saving me a bit of effort  
>here and there.

Is this a new feature in the Autek? I've had one for several years and love it, but it does *\*not\** automatically slew - you need to tweak the pots by hand to find the point of lowest SWR.

- Jeff, WA6AHL

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: George Gingell <k3tks@u1.abs.net>  
Subject: [232] Re: Dipole Wire Diameter

Message-ID: <Pine.BSI.3.93.960920130738.23779B-100000@u1.abs.net>

Subject: Re: Dipole Wire Diameter

Hi L.B.,

Just thought I would compliment you on the very interesting response to the Dipole Wire Size vs Bandwidth discussion. I am curious, is there a formula for calculating those factors for a "CAGE Dipole"? I don't recall seeing design information on it. Although I probably have it somewhere in one of the multitude of Antenna books in my library. I had also considered making a helically wound dipole using cpcv pipe (lighter weight than pvc), "Stained Glass Copper foil", and supporting it with Dacron rope threaded thru the cpvc pipe and hung between my trees around 30-40 feet up. I suspect that I will get a bit of sag. I was hoping to come up a 160 meter model in the space of a short 80 meter dipole. I havn't measured the space yet. I am guessing about 100 feet. Any comments are appreciated.

QRP DX TU (C) 1986 G.Danny Gingell, K3TKS@abs.net  
Maryland Milliwatt Club QRP Reference Library, (301)572-6789

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Vic Simpson <vsimpson@boco.demon.co.uk>  
Subject: [235] Re: G-land article on 3rd method of SSB  
Message-ID: <3w\$iSGA77sQyEwUk@boco.demon.co.uk>

In article <199609200435.AA012624131@holmes.ece.orst.edu>, Roger Traylor  
<traylor@ECE.ORST.EDU> writes

>Guys,

> I'm looking for an article supposedly printed in:

>

> The Radio and Electronic Engineer

> Vol 43, No. 3,

> March 1973

> pp209-215

>

> This article (unnamed) describes a receiver built  
> using the "AC-coupled" version of the Weaver  
> method.

The first part of a lead article on the construction of a "Third Method" ssb hf transceiver is printed in the RadCom of June 1996. The final part is printed in this month's edition. This looks to be a decidedly non-trivial construction project.

The writer is Peter Rhodes G3XJP: he cites his original inspiration as the 'definitive article by D K Weaver' in Proc IERE, December 1956.

HTH

--

Vic G0BVZ QRP-L 666

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Brian Dockter <brian@nds.com>  
Subject: [227] Re: Learning Morse (Long)  
Message-ID: <96Sep20.092606pdt.171207-218+289@rainier.nds.com>

On Sep 20, 12:00pm, Marshall Emm wrote:

> Subject: Learning Morse (Long)  
> The following article came my way recently and I thought it might be of interest  
> to the group (copyright notice at the END allows for this redistribution).  
[Edited for brevity]  
>  
> SO YOU WANT TO LEARN MORSE CODE  
>  
> How to Avoid Frustration, Minimize the Pain  
> And Gain Full HF Privileges  
>  
> By David G. Finley, N1IRZ  
> Copyright (C) 1995 All Rights Reserved\*

You can also access a copy of this article via the Web at:

<http://hawk.nmt.edu/bateman/sara/finley.morse.html>

72,

Brian

--

Brian Dockter (KC7JZL)	Email: brian@nds.com
Sr. Software Engineer	Voice: 206-524-0014
Northwest Digital Systems	FAX: 206-524-3440

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996



From: "Brian.Buydens@usask.ca" <buydens@duke.usask.ca>  
Subject: [229] Re: Learning Morse (Long)  
Message-ID: <Pine.OSF.3.95.960920105254.23283A-100000@duke.usask.ca>

The message you posted also exists at a web site. If people are really interested I could look up what it is.

Brian.

```
+-----+
| Brian Buydens, Computing Services, University of Saskatchewan |
| email: Brian.Buydens@usask.ca |
| VE5RDV |
+-----+
| "If I had only known, I would have been a locksmith." |
| -- Albert Einstein |
+-----+
```

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: kc5moe@juno.com (John E Hutter)  
Subject: [212] Re: Moderation Vote Resu  
Message-ID: <19960919.224754.10215.3.KC5MOE@juno.com>

Dan,

You really hit the nail on the head that time, i.e. it's time to stop being polite calling them internet cops and call them what they really are: VIGILANTES!!!

As to your other post, I have never liked Microsoft's arrogant attitude toward their customers but I finally became a PROUD member of the BGB when I heard the real story about Microsoft's Machiavellian machinations concerning OS/2 (a great OS) and Windows 95. IMHO, the man has the ethics of an alley cat and the morals of a lawyer; or is it the other way around? Whatever.

SPEED KILLS, RUN Windows 95!

73 de KC5MOE -- John

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: [231] Re: QRP AField/Torreon, NM/Sept. 21, 1996

Message-ID: <Pine.SUN.3.90.960920095927.4550B-100000@vortex.sage.dri.edu>

On Fri, 20 Sep 1996, Jay D Miller wrote:

>  
> By the way, the Producers, from "Sesame Street" (Big Bird) had called,  
> and they are missing a few "R's", did You Guys & Gals in New England  
> steal them again ? ; ) Noticed that sign in Texas had read "Ama illo"  
> too. ; )  
>

Naw, I don't think it was them.....they were all quued up by the  
bubbler.....

cu in test,

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....  
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....  
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

From owner-qrp-l@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Bob Edwards <rbe@atlanta.com>  
Subject: [237] Re: QRP AField/Torreon, NM/Sept. 21, 1996  
Message-ID: <32433366.1389@atlanta.com>

This is a multi-part message in MIME format.

-----668C4743FF6  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Jay D Miller wrote:

> ...the call ...we will be abusing... will  
> be NA5N (famous or infamous)...

FAMOUS, for sure, IMHO.

> By the way, the Producers, from "Sesame Street" (Big Bird) had called,  
> and they are missing a few "R's", did You Guys & Gals in New England  
> steal them again ?

I love it, you brought out a laugh, even on a Friday afternoon.

Course, if "we all" would speak a little quicker, they'd have plenty of time up thar so as not to have to drop a few letters now and then ;)

-----668C4743FF6  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit  
Content-Disposition: inline; filename="FOOTER.TXT"

+-----+  
| Bob, AE4CA, WAS-5W | ..... "QRP", more from less....  
+-----+  
ARCII-8760, MIQRP-1410, COQRP-118, QRPL-606, ARS-145, NorCAL

-----668C4743FF6--

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: bcutter@teal.csn.net (Bob Cutter)  
Subject: [226] Re: Sierra Band Module for 1750 Meters  
Message-ID: <199609201552.JAA03649@lynx.csn.net>

I operated a beacon "CO" for several years using a clock motor, interrupted IR beam for a keyer. It is really a great experimenters band but you must have a high pain tolerance or live closer to more experimenters than I.

It is amazing what you can copy on this cold, clear winter nights.

73, Bob KI0G

>  
QBF? ZUE

Bob Cutter, .....Glenwood Springs, CO

KI0G

bcutter@teal.csn.net

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: Duane Anderson <usnret@cris.com>  
Subject: [249] Re: TenTec Scout

Message-ID: <32435CE5.5916@cris.com>

I just recently purchased a TenTec Scout 555 and like it very much. I found the power control pot on the under side with a label showing you right where it is. The Scout has a meter on the front panel you can use to see when it is down to the power level you want. I am using Hamsticks and they load up pretty easy using this panel meter in the SWR setting. There is also a forward power setting as well. I don't think you will be sorry for having purchased it.

72/73,  
Duane, KJ7H0

Jim Hunter wrote:

>  
> I would like to get an evaluation of the Ten Tec scout. I am interested  
> in doing some mobile work and portable work  
>  
> How easy to tune down to 5 watts , how is the receiver, etc  
>  
> tnxs

From owner-qrp-1@Lehigh.EDU Fri Sep 20 23:12:51 1996  
From: DYARNES@aol.com  
Subject: [215] Re: The Sierra Revisited (Long)  
Message-ID: <960920033018\_482229422@emout16.mail.aol.com>

Doug and the gang,

I whole heartedly agree with all your comments about the Sierra and its designer. I added the KC2, including new panel from Wilderness, about two weeks ago. I am certain I must be the happiest Sierra owner around. I know it's a kit and therefore not "totally" homebrew, but I am still very proud of the fact that I have lumped together all these parts into a very effective transceiver. Now I have digital display and a place to put the abx control. It is so much fun just showing this thing off! What a great piece of gear!

I have already expounded more than sufficiently on the Sierra in previous postings, but I just want to add briefly how consistent the quality is on the KC2. The manual is 1st class (as usual for a Burdick production--I had heard he was "on drugs" while writing this one--remember he was sick around field day--but the logic is all there in excellent form. Great job Wayne!

My thanks AGAIN to Wayne and QRP Bob for another great kit accessory, and to Doug and Jim for the NorCal participation in getting this first batch of KC2's out.

Tomorrow I leave for Oregon (Salem for a few days to visit relatives and then the coast for a few days more) and I am taking the Sierra with me instead of the QRP+. The only downer about this whole trip was when Doug spilled the beans about the St. Louis Vertical and I couldn't get one!

72 de David W7AQK